

AMENDMENTS

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IN THE CLAIMS

Please cancel claim 32 without prejudice, amend claims 30, 31 and 33, and add new claims 4052 as follows:

30. (Amended) A method of manufacturing a micro-needle structure for penetrating the skin and other tissue barriers, said method comprising the steps of:

providing a suitable material from which said micro-needle structure can be fabricated by means of one or more at least one micro-replication techniques;

fabricating said micro-needle structure from said suitable material by means of one or more said at least one micro-replication techniques, wherein said micro-needle structure has comprises a proximal end defining a base having a center and a distal end having a vertex comprising a sharp tip, wherein said base has a diameter in the range from about 100 to 2,000 μm and the a line extending from the said center of the base to the said vertex defines a structural axis having a length in the range from about 100 to 10,000 μm ; and

forming an open lumen within said micro-needle structure, said open lumen defining a luminal axis and extending from said base to said distal end vertex, wherein the a distal end of said open lumen intersects said vertex and wherein said luminal axis and said structural axis are not co-axial; and

customizing a tip at said vertex end, said customized tip being selectively angled for a particular application.

31. (Amended) The method according to of claim 30, wherein said open lumen is formed during the step of fabricating.

32. (Cancelled)

33. (Amended) The method according to of claim 30 40 wherein said selectively angled tip comprises a beveled edge.

40. (New) The method of claim 30 further comprising forming a selectively angled tip at said vertex.

41. (New) The method of claim 30 wherein said suitable material is chosen from the group of a plastic and a resin.

42. (New) The method of claim 30 wherein said suitable material is chosen from the group of acrylic, polyacrylates, polycarbonate, epoxies, polyesters polyetheretherketone, polyvinylchloride, polyolefins and liquid crystalline polyesters.

43. (New) The method of claim 41 wherein said at least one micro-replication technique comprises injection molding.

44. (New) The method of claim 30 wherein said suitable material comprises a metal.

45. (New) The method of claim 30 wherein the diameter of said open lumen is configured to exert a capillary force on a fluid present at said distal end of said open lumen.

46. (New) A method of manufacturing a micro-needle structure, said method comprising:
providing a plastic material;

 fabricating said micro-needle structure by injection molding said plastic material, wherein said micro-needle structure comprises an oblique cone configuration having a base and a vertex comprising a sharp tip; and

 forming an open lumen within said micro-needle structure, said open lumen extending from said base to said vertex wherein a distal end of said open lumen intersects said vertex.

47. (New) The method of claim 46 wherein a line extending from a center of said base to said vertex defines a structural axis, wherein said open lumen defines a luminal axis, and wherein said luminal axis and said structural axis are not co-axial.

48. (New) A method of manufacturing a device comprising a micro-needle structure, said method comprising:

providing a suitable material from which said micro-needle structure can be fabricated by at least one micro-replication technique;

fabricating said micro-needle structure from said suitable material by said at least one micro-replication technique, wherein said micro-needle structure comprises an oblique cone configuration having a base and a vertex configured for penetrating the skin and other tissue barriers;

forming an open lumen within said micro-needle structure, said open lumen extending from said base to said vertex wherein a distal end of said open lumen intersects said vertex; and

integrating said micro-needle structure with another structure wherein said open lumen is in fluid communication with said other structure.

49. (New) The method of claim 48, wherein said other structure comprises provided with means for receiving fluid and measuring a constituent of fluid received therein.

50. (New) The method of claim 48, wherein said other structure comprises a chamber for holding a fluid therein.

51. (New) The method of claim 50, wherein said fluid is a therapeutic agent.

52. (New) The method of claim 48, further comprising fabricating a plurality of said micro-needle structures and integrating said plurality with said other structure wherein said open lumen of each said micro-needle structure is in fluid communication with said other structure.